

I claim:

1. A power semiconductor module for mounting on a cooling element, comprising at least one substrate on which one or more semi-conductor components are located, and a pressing apparatus, which acts on the substrate, in order to press the substrate against the cooling element when it is in the mounted state, with the pressing apparatus being formed by a module housing having one or more resilient areas, wherein the resilient areas are formed by areas with recesses and/or cross-sectional constrictions in the module housing, and the pressing apparatus has pressing stamps which are connected to the resilient areas.
2. The power semiconductor module as claimed in claim 1, wherein the resilient areas are integral material components of the module housing.
3. The power semiconductor module as claimed in claim 1, wherein the pressing apparatus acts on the substrate at two or more points which are distributed uniformly over the substrate.
4. The power semiconductor module as claimed in claim 1, wherein the pressing apparatus acts circumferentially on the edge area of the substrate.
5. The power semiconductor module as claimed in claim 1, wherein the module housing has a first housing part and a second housing part, which applies a spring force to the first housing part.
6. The power semiconductor module as claimed in claim 1, wherein the resilient areas are formed by spring elements which are integrally formed on the module housing.

7. A power semiconductor module comprising:
a cooling element;
a module housing mounted on said cooling element comprising resilient areas formed by areas with recesses and/or cross-sectional constrictions in the module housing, and pressing stamps which are connected to the resilient areas, and
a substrate arranged on said cooling element comprising a semi-conductor component, wherein the pressing stamps exert a force on said substrate.
8. The power semiconductor module as claimed in claim 7, wherein the resilient areas are integral material components of the module housing.
9. The power semiconductor module as claimed in claim 7, wherein the pressing stamps act on the substrate at two or more points which are distributed uniformly over the substrate.
10. The power semiconductor module as claimed in claim 7, wherein the pressing stamps act circumferentially on the edge area of the substrate.
11. The power semiconductor module as claimed in claim 7, wherein the module housing has a first housing part and a second housing part, which applies a spring force to the first housing part.
12. The power semiconductor module as claimed in claim 7, wherein the resilient areas are formed by spring elements which are integrally formed on the module housing.

13. A power semiconductor module comprising:
a cooling element;
a module housing comprising a first housing part and a second housing part, which applies a spring force to the first housing part, mounted on said cooling element, said second housing part comprising resilient areas formed by areas with recesses and/or cross-sectional constrictions in the module housing, and pressing stamps which are connected to the resilient areas, and
a substrate arranged on said cooling element comprising a semi-conductor component, wherein the first housing part and the pressing stamps exert a force on said substrate.
14. The power semiconductor module as claimed in claim 13, wherein the resilient areas are integral material components of the module housing.
15. The power semiconductor module as claimed in claim 13, wherein the pressing stamps act on the substrate at two or more points which are distributed uniformly over the substrate.
16. The power semiconductor module as claimed in claim 13, wherein the pressing stamps act circumferentially on the edge area of the substrate.
17. The power semiconductor module as claimed in claim 13, wherein the resilient areas are formed by spring elements which are integrally formed on the module housing.